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EXAMINER

FUREMAN, J

ART UNIT

PAPER NUMBER

2876

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/320,457

Applicant(s)

Ishii

Examiner

Jared Fureman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/12/2001 and 2/26/2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on May 27, 1999 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

DETAILED ACTION

1. Receipt is acknowledged of the amendment filed on 2/12/2001 and the supplemental response filed on 2/26/2001, both of which have been entered in the file. Claims 1-6 are pending.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rotary encoder (see claim 3) must be shown or the feature(s) cancelled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall et al (US 5,525,788, previously cited) in view of Inagaki (JP 3-1285) and Nishimura et al (US 5,436,439, previously cited).

Re claims 1, 2, and 4-6: Bridgelall et al teaches an optical symbol reading device comprising: an image data input section that is provided with an image data input unit (scanner 40) for receiving a bar code label (50) on an article (3010) that is moved by a conveyor, an image data input focus point modifier (within microprocessor 10), an article detector (article sensor 3100) for detecting that the article has entered a read zone, an interpreter for converting electric signals from the image data input section to numbers or characters, an interpretation result output section for outputting the interpretation results of the interpreter to an external device, a front surface position detector (belt speed indicator 3000) for detecting a position on the conveyor of a front surface of an article that is moved by the conveyor, an image data input focus point control section for outputting data from the front surface position detector to the image data input focus point modifier, the image data input focus point control section including means for converting front surface position data of the article that are received from the front surface position detector to a reading distance, which is the distance between the image data input unit and the front surface of the article, and outputting the reading distance as focus point data to the image data input focus point modifier, the image data input focus point modifier including means for matching the focus point to the front surface of the article that moves constantly over time by setting the focus point to a position designated by the focus point data that are received from the image data input focus point control section (see 1, 2, 4, 25, column 1 lines 28-45, column 4 lines 34-65, column 6 line 18 - column 7 line 40, column

7 line 54 - column 9 line 34, column 10 line 62 - column 11 line 41, and column 20 lines 20-34).

Bridgelall et al fails to teach the image data input section including a front surface symbol reading device and back surface symbol reading device, and means for reading two surfaces, a side surface/back surface or a side surface/front surface, of an article moved by a conveyor by fixing a focus on a position of the side surface and reading the side surface when receiving a bar code label on the side surface of the article from the image data input unit.

Inagaki teaches an optical symbol reading device comprising: an image data input section (first reading mechanism 6) which includes a front surface symbol reading device (reader 3-2) and back surface symbol reading device (reader 3-1), and means (readers 3-1 and 3-2 in combination with readers 1-1 and 1-2) for reading two surfaces, a side surface/back surface or a side surface/front surface (see figures 1-3 and the translation of the abstract).

In view of Inagaki's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the system as taught by Bridgelall et al, the image data input section including a front surface symbol reading device and back surface symbol reading device, and means for reading two surfaces, a side surface/back surface or a side surface/front surface, of an article moved by a conveyor by fixing a focus on a position of the side surface and reading the side surface when receiving a bar code label on the side surface of the article from the image data input unit, in order to provide a system where a bar code can be read irrespective of an arranged position of a article.

Bridgelall et al as modified by Inagaki fails to specifically teach a front surface/back surface position detector for detecting a position on the conveyor of both a front surface and a back surface of an article that is moved by the conveyor, the front surface/back surface position detector including means that is provided with a light projection position detector and a light reception position detector made up of a plurality of transmissive multiple optical axis sensors, for finding the position of the front surface of the article by detecting which transmissive multiple optical axis sensors of the plurality of transmissive multiple optical axis sensors of the light projection position detector are being shielded by the article.

Nishimura et al teaches an optical symbol reading device including: a front surface/back surface position detector (article location detector 12) for detecting a position on the conveyor of both a front surface and a back surface of an article that is moved by a conveyor, the front surface/back surface position detector includes means that is provided with a light projection position detector and a light reception position detector made up of a plurality of transmissive multiple optical axis sensors (light sources 34a-34k and light interceptors 35a-35k), for finding the position of the front surface of the article by detecting which transmissive multiple optical axis sensors of the plurality of transmissive multiple optical axis sensors of the light projection position detector are being shielded by the article (see figures 1-8, column 3 line 63 - column 4 line 35, column 5 line 62 - column 6 line 14).

In view of Nishimura et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system, as taught by Bridgelall et al as

modified by Inagaki, to include a front surface/back surface position detector for detecting a position on the conveyor of both a front surface and a back surface of an article that is moved by the conveyor, the front surface/back surface position detector including means that is provided with a light projection position detector and a light reception position detector made up of a plurality of transmissive multiple optical axis sensors, for finding the position of the front surface of the article by detecting which transmissive multiple optical axis sensors of the plurality of transmissive multiple optical axis sensors of the light projection position detector are being shielded by the article, since it is an art recognized functional equivalent to sensing the presence of the article and sensing the belt speed to determine the articles position (see column 5 line 62 - column 6 line 14), as taught by Bridgelall et al.

Re claim 3: The teachings of Bridgelall et al as modified by Inagaki and Nishimura et al have been discussed above. Bridgelall et al also teaches the front surface position detector including means for measuring a distance of movement of the conveyor (see figure 4 and column 9 lines 1-35).

Bridgelall et al as modified by Inagaki and Nishimura et al fails to specifically teach means provided with a rotary encoder that is attached to the conveyor, for finding the position of the front surface of the article by counting pulses from the rotary encoder and measuring a distance of movement of the conveyor.

However, at the time of the invention it was well known to those of ordinary skill in the art to use a rotary encoder to find a position by counting pulses from the rotary encoder and measuring a distance of movement.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate, with the system as taught by Bridgelall et al as modified by Inagaki and Nishimura et al, means provided with a rotary encoder that is attached to the conveyor, for finding the position of the front surface of the article by counting pulses from the rotary encoder and measuring a distance of movement of the conveyor, since it is an obvious variation in the means for measuring a distance of movement of the conveyor, well within the ordinary skill in the art at the time of the invention, that fails to produce any unexpected results.

Response to Arguments

5. Applicant's arguments filed 2/12/2001 and 2/26/2001 have been fully considered but they are not persuasive.

In response to applicant's argument that the rotary encoder is described in an alternative embodiment (see page 3 of the amendment filed on 2/12/2001), as set forth above, the drawings must show every feature of the invention specified in the claims. It is noted that the specification (page 13, lines 16-26) does not contain a written description of a rotary encoder so as to enable any person skilled in the art to which it pertains, or with which it is most nearly

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connected, to make and use the rotary encoder. Is applicant relying on the general knowledge of those of ordinary skill in the art at the time of the invention for this teaching?

In response to applicant's argument that the examiner has provided no evidence that the claimed rotary encoder was well known in the art (see page 4 of the amendment filed on 2/12/2001), Stringer et al (US 5,636,028, see column 6 lines 57-67), Kobayashi (US 5,373,363, see column 1 lines 49-62, column 3 lines 55-68, and column 4 lines 46-68), and Gerritsen et al (US 4,656,343, see figure 4 and column 5 lines 5-28) all teach the use of rotary encoders.

In response to applicant's argument that there is no suggestion to combine a rotary encoder with Bridgelall et al, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is within the knowledge generally available to one of ordinary skill in the art at the time of the invention that rotary encoders may be used to measure a distance of the movement of a conveyor, rotary encoders are art recognized functional equivalents to other means of measuring movement, such as light beam emitter/receiver pairs or contact wheels (see Stringer et al, US 5,636,028, column 6 lines 57-

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67). Furthermore, applicant's have failed to show that the use of a rotary encoder in the present invention produces any unexpected results.

In response to applicant's argument that Bridgelall et al does not teach or suggest these features (an image data input focus point control section, see page 2 of the response filed on 2/26/2001), Bridgelall et al teaches the microprocessor 10, in response to various feedback signals (image data input focus point control section), generates pattern control signals (image data input focus point modifier) for output to the rotator/translator 30, which controls the position of scan pattern, and thus, the focus point (see column 7 lines 3-40, column 8 line 49 - column 9 line 35, column 10 line 62 - column 11 lines 41).

6. Applicant's other arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Stringer et al (US 5,636,028), Kobayashi (US 5,373,363), and Gerritsen et al (US 4,656,343) all teach the use of rotary encoders. Moss et al (US 6,161,759), Cherry et al (US 6,142,376), Lemelson (US 5,966,457), Jensen (US 5,331,118), and Yamaguchi (JP 7-319989) all teach systems for reading images on objects traveling on a conveyor.

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8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jared Fureman** whose telephone number is (703) 305-0424. The examiner can normally be reached between the hours of 7:00AM to 4:30PM Monday thru Thursday and every other Friday (second Friday of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael G. Lee, can be reached on (703) 305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, or (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [jared.fureman@uspto.gov].

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Applicant(s): Ishii (235/462.01)

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All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

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April 30, 2001


MICHAEL G. LEE
SUPERVISORY PATENT EXAMINER
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